Prevalence of Hydro-Meteorological Calamities

Why in News

Recently, the **Ministry of Home Affairs** has informed that nearly **6,800 people lost their lives** in the country **(West Bengal tops the list)** over the **past three years** due to **hydro-meteorological calamities** such as **flash floods**, **landslides** **and** **cyclones**.

Key Points

- **Hydro-Meteorological Calamities:**
    - **Natural hazards** are severe natural phenomena or events, broadly classified in **two categories: hydro-meteorological and geological hazards.**
    - **Tropical cyclones, heavy rainfall, severe thunderstorms, floods and drought** are hydro-meteorological hazards whereas e**arthquakes and volcanic eruptions** are grouped under geological hazards.
    - **Landslides and avalanches** are caused by a combination of geological and hydro-meteorological factors.
- **India's Vulnerability:**
    - The basic reason for the **high vulnerability of the country** to natural disasters is its **unique geographical and geological situations.**
    - As far as the vulnerability to disaster is concerned, the four distinctive regions of the country i.e. **Himalayan region, the alluvial plains, the hilly part of the peninsula, and the coastal zone** have their own specific problems.
    - While on one hand the **Himalayan region is prone to disasters like earthquakes** and landslides, the **plain is affected by floods** almost every year.
    - The **desert part of the country is affected by droughts and famine** while the **coastal zone is susceptible to cyclones and storms.**
    - Various **human induced activities** like increasing demographic pressure, deteriorating environmental conditions, deforestation, unscientific development, faulty agricultural practices and grazing, unplanned urbanisation, construction of large dams on river channels etc. are also responsible for accelerated impact and increase in frequency of disasters in the country .
- **Impact of Disaster:**
    - **Physical and Psychological:**
        - Disaster impacts individuals physically (through loss of life, injury, health, disability) as well as psychologically.
        - The disaster results in **displacement of people, and displaced populations often face several challenges in new settlements**, in this process the poor become more poor.
    - **Alter Natural Environment:**
        - Disaster can alter the natural environment, **loss of habitat to many plants and animals** and cause ecological stress that can result in **biodiversity loss.**

- **Disaster Management:**
    - **National Disaster Management Authority of India (NDMA)**: It was established in 2005, under the **Disaster Management (DM) Act 2005**.
    - **National Disaster Management Plan (NDMP): Released in 2016**, it is the first **ever national plan** prepared in the country for disaster management.
    - **State Disaster Management Authority (SDMA)**: Headed by the **Chief Minister of the respective state**, SDMA lays down the policies and plans for disaster management in the state.
    - **District Disaster Management Authority (DDMA): Section 25 of the DM Act** provides for the **constitution of DDMA for every district of a state.**
    - Other measures include National Cyclone Risk Mitigation Project (NCRMP), National Disaster Response Reserve (NDRR), Aapda Mitra Scheme, ETC.
- **Challenges in Disaster Risk Reduction:**
    - **Poor Implementation of Monitored Activity:**
        - There are insufficient levels of implementation for each monitored activity. For example, Disaster risk management plans or risk sensitive building codes exist but they are not enforced because of a lack of government capacity or public awareness.
    - **Lack of Local Capacities:**
        - Weak capacity at the local levels undermines the implementation of Disaster preparedness plans.
    - **Climate Change:**
        - Absence of integration of climate change into Disaster risk management plans.
    - **Divergence in Commitments:**
        - There is divergence in obtaining political and economic commitments due to other competing needs and priorities such as poverty reduction, social welfare, education etc. requiring greater attention and funding.
    - **Lack of Coordination:**
        - Due to poor coordination between stakeholders, there is inadequate access with respect to risk assessment, monitoring, early warning, disaster response and other Disaster related activities.
    - **Insufficient Investment:**
        - Insufficient investment in building disaster resilient strategies, also private sector are least contributors in the share of investment.
- **Initiatives for Disaster Risk Reduction:**
    - Sendai Framework for Disaster Risk Reduction 2015-2030**:**
        - The present Framework applies to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters caused by natural or man-made hazards, as well as related environmental, technological and biological hazards and risks.
        - It is the **successor instrument to the Hyogo Framework for Action (HFA) 2005-2015.**
    - **United Nations Office for Disaster Risk Reduction (UNDRR):**
        - UNDRR (formerly UNISDR) is the **United Nations focal point for disaster risk reduction.**
        - It **oversees the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030**, supporting countries in its implementation, monitoring and sharing what works in reducing existing risk and preventing the creation of new

risk.

- **Coalition for Disaster Resilient Infrastructure (CDRI)**:
    - **Established in 2019** under the leadership of India, it aims to **promote the resilience of new and existing infrastructure systems** to climate and disaster risks in support of sustainable development.

Way Forward

- Although the **DM Act has undoubtedly filled a huge gap** in the scheme of governmental actions towards dealing with disasters, laying down elaborate plans on paper doesn't serve the purpose unless they are translated into effective implementation.
- Civil society, private enterprises and **Non-governmental Organizations (NGOs)** can play a valuable role towards building a safer India.

Source: TH